

## CLAIMS

1. A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions; and
- (c) selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein identifying D.C. and A.C. components for said adjacent regions and said selectively filtering based upon a similarity of said D.C. and said A.C. components.

2. A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions;
- (c) selectively filtering at least a portion of said region proximate boundary between said adjacent regions based upon said coding parameters;
- (d) identifying similarities between coding parameters in a luminance channel of said adjacent regions; and
- (e) controlling filtering for both the luminance channel and a chrominance channel in said image according to similarities in the luminance channel.

3. A method for at least one of encoding and decoding an image, said method comprising:
  - (a) identifying adjacent regions in said image;
  - (b) examining coding parameters for said adjacent regions; and
  - (c) selectively filtering at least a portion of said region proximate the boundary between said adjacent regions based upon said coding parameters,wherein said selectively filtering is based upon determining whether at least one of said adjacent regions are intra-coded.
4. A method for at least one of encoding and decoding an image, comprising:
  - (a) identifying adjacent regions in said image;
  - (b) examining coding parameters for said adjacent regions;
  - (c) selectively filtering at least a portion of said regions proximate the boundary between said adjacent regions based upon said coding parameters,wherein said selectively filtering is based upon determining whether at least one of said adjacent regions is encoded with residuals.
5. A method for at least one of encoding and decoding an image, comprising:
  - (a) identifying adjacent regions in said image;

- (b) examining coding parameters for said adjacent regions; and
- (c) selectively filtering at least a portion of said regions proximate a boundary between said adjacent regions based upon said coding parameters,

wherein said selectively filtering is based upon determining whether at least two of said adjacent regions are predicted based upon two different reference frames.

6. A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions; and
- (c) selectively filtering at least a portion of said region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selectively filtering is based upon determining whether at least two of said adjacent regions have an absolute difference of said motion vectors of said at least two adjacent regions at least one of greater than or less than a threshold value.

7. The method of claim 6 wherein said absolute difference is in a first direction.

8. The method of claim 7 wherein said absolute difference is also in a second direction different than said first direction.
9. A method for at least one of encoding and decoding an image, comprising:
  - (a) identifying adjacent regions in said image;
  - (b) examining coding parameters for said adjacent regions; and
  - (c) selectively filtering at least a portion of the region proximate a boundary between said adjacent regions based upon said coding parameters,wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded.
10. A method for at least one of encoding and decoding an image, comprising:
  - (a) identifying adjacent regions in said image;
  - (b) examining coding parameters for said adjacent regions; and
  - (c) selectively filtering at least a portion of said regions proximate the boundary between said adjacent regions based upon said coding parameters,wherein said selective filtering uses a first filter when said adjacent regions are intra-coded and a second filter when said at least one of said adjacent regions is encoded with said residuals.

11. A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions; and
- (c) selectively filtering at least a portion of said region proximate the boundary between said adjacent regions based upon said coding parameters;

wherein said selective filtering uses a first filter when said adjacent regions are intra-coded, a second filter when said at least one of said adjacent regions is encoded with said residuals, and a third filter when said at least two of said adjacent regions are predicted based upon said two different reference frames.

12. A method for at least one of encoding and decoding an image, comprising:

- (a) identifying adjacent regions in said image;
- (b) examining coding parameters for said adjacent regions; and
- (c) selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selective filtering uses a first filter when said adjacent regions are intra-coded, a second filter when said at least one of said adjacent regions is encoded with said residuals, a third filter when said at least two of said adjacent regions are predicted based upon two different reference frames, and said third filter when said at least two of said adjacent regions have said absolute

difference of said motion vectors of said at least two adjacent regions said at least one of greater than or less than a threshold value.

13. An encoder for encoding an image comprising:
  - (a) a processor adapted to identify adjacent regions in said image;
  - (b) said processor examining coding parameters for said adjacent regions;  
and
  - (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,  
wherein identifying D.C. and A.C. components for said adjacent regions and said selectively filtering based upon a similarity of said D.C. and said A.C. components.
14. An encoder for encoding an image comprising:
  - (a) a processor adapted to identify adjacent regions in said image;
  - (b) said processor examining coding parameters for said adjacent regions;
  - (c) said processor selectively filtering at least a portion of the region proximate a boundary between said adjacent regions based upon said coding parameters;
  - (d) said processor identifying similarities between coding parameters in a luminance channel of said adjacent regions; and

- (e) said processor controlling filtering for both the luminance channel in said image according to similarities in the luminance channel.

15. An encoder for encoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions;  
and
- (c) said processor selectively filtering at least a portion of the region proximate a boundary between said adjacent regions based upon said coding parameters, are intra-coded.

16. An encoder for encoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions;  
and
- (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selectively filtering is based upon determining whether at least one of said adjacent regions is encoded with residuals.

17. An encoder for encoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions;  
and
- (c) said processor selectively filtering at least a portion of the region  
proximate a boundary between said adjacent regions based upon said  
coding parameters,

wherein said selectively filtering is based upon determining whether at least two of said adjacent regions are predicted based upon two different reference frames.

18. An encoder for encoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions;  
and
- (c) said processor selectively filtering at least a portion of the region  
proximate a boundary between said adjacent regions based upon said  
coding parameters,

wherein said selectively filtering is based upon determining whether at least two of said adjacent regions have an absolute difference of said motion vectors of said at least two adjacent regions at least one of greater than or less than or less than a threshold value.



19. The encoder of claim 18 wherein said absolute difference is also in a first direction.
20. The encoder of claim 19 wherein said absolute difference is also in a second direction different than said first direction.
21. An encoder for encoding an image comprising:
  - (a) a processor adapted to identify adjacent regions in said image;
  - (b) said processor examining coding parameters for said adjacent regions;and
  - (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,wherein said selective filtering uses a first filter when said adjacent regions are intra-coded.
22. An encoder for encoding an image comprising:
  - (a) a processor adapted to identify adjacent regions in said image;
  - (b) said processor examining coding parameters for said adjacent regions;and

- (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selective filtering uses a first filter when said adjacent regions are intra-coded and a second filter when said at least one of said adjacent regions is encoded with residuals.

23. An encoder for encoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions; and
- (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selective filtering uses a first filter when said adjacent regions are intra-coded, a second filter when said at least one of said adjacent regions is encoded with said residuals, and a third filter when said at least two of said adjacent regions are predicted based upon said two different reference frames.

24. An encoder for encoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;

- (b) said processor examining coding parameters for said adjacent regions;  
and
- (c) said processor selectively filtering at least a portion of the region  
proximate the boundary between said adjacent regions based upon said  
coding parameters;

wherein said selective filtering uses a first filter when said adjacent regions are intra-coded, a second filter when said at least one of said adjacent regions is encoded with said residuals, a third filter when said at least two of said adjacent regions are predicted based upon said two different reference frames, and said third filter when said at least two of said adjacent regions have said absolute difference of said motion vectors of said at least two adjacent regions said at least one of greater than or less than a threshold value.

25. A decoder for encoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions;  
and
- (c) said processor selectively filtering at least a portion of the region  
proximate the boundary between said adjacent regions based upon said  
coding parameters,

wherein identifying D.C. and A.C. components for said adjacent regions and  
said selectively filtering based upon a similarity of said D.C. and said A.C.

components.

26. An decoder for decoding an image comprising:
- (a) a processor adapted to identify adjacent regions in said image;
  - (b) said processor examining coding parameters for said adjacent regions;
  - (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters;
  - (d) identifying similarities between coding parameters in a luminance channel of said adjacent regions; and
  - (e) controlling filtering for both the luminance channel and a chrominance channel in said image according to similarities in the luminance channel.
27. A decoder for decoding an image comprising:
- (a) a processor adapted to identify adjacent regions in said image;
  - (b) said processor examining coding parameters for said adjacent regions; and
  - (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selectively filtering is based upon determining whether at least one of said adjacent regions is intra-coded.

28. A decoder for decoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions;  
and
- (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selectively filtering is based upon determining whether at least one of said adjacent regions is encoded with residuals.

29. A decoder for decoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions;  
and
- (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selectively filtering is based upon determining whether at least two of said adjacent regions are predicted based upon two different reference frames.

30. A decoder for decoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions; and
- (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selectively filtering is based upon determining whether at least two of said adjacent regions have an absolute difference of motion vectors of said at least two adjacent regions said absolute difference being at least one of greater than or less than a threshold value.

31. The decoder of claim 30 wherein said absolute difference is in a first direction

32. The decoder of claim 31 wherein said absolute difference is also in a second direction different than said first direction.

33. A decoder for decoding an image comprising:
- (a) a processor adapted to identify adjacent regions in said image;
  - (b) said processor examining coding parameters for said adjacent regions; and
  - (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,
- wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded.

34. A decoder for decoding an image comprising:
- (a) a processor adapted to identify adjacent regions in said image;
  - (b) said processor examining coding parameters for said adjacent regions; and
  - (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,
- wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded and a second filter when said at least one of said adjacent regions is encoded with residuals.

35. A decoder for decoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions; and
- (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded, a second filter when said at least one of said adjacent regions is encoded with residuals, and a third filter when said at least two of said adjacent regions are predicted based upon two different reference frames.

36. A decoder for decoding an image comprising:

- (a) a processor adapted to identify adjacent regions in said image;
- (b) said processor examining coding parameters for said adjacent regions; and
- (c) said processor selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters,

wherein said selectively filtering uses a first filter when said adjacent regions are intra-coded, a second filter when said at least one of said adjacent regions is encoded with residuals, a third filter when said at least



two of said adjacent regions are predicted based upon two different reference frames, and said third filter when said at least two of said adjacent regions have an absolute difference of motion vectors of said at least two adjacent regions said at least one of a greater than or less than a threshold value.

37. A computer readable medium comprising instructions for performing the acts of :
- (a) identifying adjacent regions in said image;
  - (b) examining coding parameters for said adjacent regions;
  - (c) selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters;
  - (d) identifying similarities between coding parameters in a luminance channel of said adjacent regions; and
  - (e) controlling filtering for both the luminance channel and a chrominance channel in said image according to similarities in the luminance channel.
38. A computer data signal embodied in an electronic transmission, said signal comprising instruction for:
- (a) identifying adjacent regions in said image;
  - (b) examining coding parameters for said adjacent regions;

- (c) selectively filtering at least a portion of the region proximate the boundary between said adjacent regions based upon said coding parameters;
- (d) identifying similarities between coding parameters in a luminance channel of said adjacent regions; and
- (e) controlling filtering for both the luminance channel and a chrominance channel in said image according to similarities in the luminance channel.